



The State of New Hampshire
Department of Environmental Services

Robert R. Scott, Commissioner



March 15, 2019

Transmitted via Email

Steven Lewis
Chandler Place Apartments LP
PO Box 1358
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**Subject: Water Conservation Plan Approval
Plaistow – Chandler Place Apartments (PWS ID#: 1932250)
Water Conservation Plan, NHDES # 996061**

Dear Mr. Lewis:

On December 31, 2018, the New Hampshire Department of Environmental Services (“DES”) Drinking Water and Groundwater Bureau received a Water Conservation Plan (the “WCP”), signed on December 24, 2018, for Chandler Place Apartments, located in Plaistow, New Hampshire. Pursuant to RSA 485:61 and Env-Wq 2101, community water systems seeking permits from DES for new sources of groundwater shall submit a water conservation plan to DES. Based on review of the WCP, DES has determined the WCP complies with Env-Wq 2101, *Water Conservation* rules.

Pursuant to Env-Wq 2101, the Town of Plaistow and the Rockingham Planning Commission were provided a copy of the WCP, along with other required materials. On March 12, 2019, DES received the certified mail return receipts associated with that public notification.

DES approves the WCP based on the following conditions:

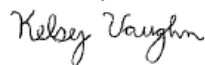
1. All meters shall be installed per the manufacturer’s instructions or American Water Works Association standards.
2. All meters shall be tested and maintained based on the schedule proposed in the WCP.
3. Source meters and any other meters measuring water consuming processes prior to distribution shall be read monthly, no sooner than 27 days and no later than 33 days from the last meter reading.
4. The system shall report monthly source production volumes to the DES Water Use Registration and Reporting Program on a quarterly basis. DES has assigned **WUID 21040** to the facility. The first quarter report due is **Quarter 2 2019**. The water system shall register as a data provider and utilize the DES OneStop reporting tool to submit water use data. Instructions for using the tool are enclosed with this letter. If you have any questions about water use reporting or registering as a data provider, please contact Stacey Herbold by phone at (603) 271-6685 or by email at stacey.herbold@des.nh.gov.
5. The primary operator, Secondwind Water Systems, Inc., is already an authorized data provider for at least one other system. If you retain Secondwind Water Systems, Inc. to report to the Water Use Registration and Reporting Program for your system, please contact Stacey Herbold by phone at (603) 271-6685 or by email at stacey.herbold@des.nh.gov to provide authorization.

6. No later than three months from the date of this approval, night flow analysis shall commence at a rate of twice a year in accordance with the night flow analysis methodology in the WCP.
7. The baseline flow for the night flow analysis shall be 0 gallons per minute.
8. Leaks shall be repaired within 60 days of discovery.
9. From the date of this approval, all non-metallic pipes installed in the system shall be outfitted with detectable tracer tape or detectable tracer wire, or be GPS located and maintained in a GIS system.
10. No later than three months from the date of this approval, a water conservation outreach and education program shall be implemented in accordance with the WCP.
11. Every three years from the date of this approval, a *Water Conservation Plan Ongoing Compliance Reporting Form* shall be submitted to DES documenting how the system has maintained compliance with the WCP. The following records shall be maintained by the water system to include with the report:
 - a. A leak log including the date a leak was discovered, the date a leak was repaired, the type of leak, the approximate size of the leak (gpm), and the location of the leak.
 - b. The title of water efficiency materials distributed and the date of distribution.
 - c. Date of installation and replacement of all meters as well as testing and calibration records.
 - d. Data from biannual night flow analyses and a brief summary of the analyses.
12. Proposed changes to the WCP shall not be implemented unless approved by DES.

The *Water Conservation Plan Ongoing Compliance Reporting Form* may be located by going to the DES website (www.des.nh.gov), clicking on the "A-Z List" in the top right corner of the page, clicking "Water Conservation," and scrolling down to "Forms/Applications."

Please feel free to contact me with any questions at (603) 271-0659 or via e-mail at kelsey.vaughn@des.nh.gov.

Sincerely,



Kelsey Vaughn
Water Conservation Program
Drinking Water and Groundwater Bureau

Attached: (2) Water Use Registration Guidance and Water Use Reporting Guidance

ec: Gino Baroni, Chandler Place LLC
Christopher Vaughn, Secondwind Water Systems, Inc.
Town of Plaistow
Rockingham Planning Commission
Steve Roy, Cindy Klevens, Stacey Herbold; DES

WATER CONSERVATION PLAN: **CHANDLER PLACE APARTMENTS WATER SYSTEM**

Chandler Place Apartments is an existing landlord owned community water system. The system obtained well approval, design approval, and started up in February 2017. Because of the possibility of connecting to another water supply shortly after the system was activated, a water conservation plan was not required prior to well approval. However, that connection did not occur, and a water conservation plan has been developed, demonstrating how the water system proposes to comply with water conservation standards pursuant to Env-Wq 2101, *Water Conservation* rules.

Activities outlined in the water conservation plan will be completed by water system personnel under the supervision of a certified water system operator.

I. Introduction

A. Contact Information

1. Name and location of system: Chandler Place Apartments, 18 Chandler Avenue, Plaistow, NH 03065
2. Owner of system and mailing address: Chandler Place Apartments Limited Partnership, PO Box 1358, Atkinson, NH 03811
3. Name and mailing address of preparer of water conservation plan: Steven W. Lewis, 11 Main Street, Atkinson, NH 03811

B. System Overview

1. Brief description of the community being served (ex. number of units, apartments, partially attached condos, individual homes, shared common facilities, population, etc.):

Chandler Place Apartments presently has one building with 25 age-restricted rental units (23 one-bedroom units and 2 two-bedroom units). The final phase of the project will have an additional building with 14 age-restricted rental units (12 one-bedroom units and 2 two-bedroom units). The complete project will have a total of 39 age-restricted rental units in two buildings (35 one-bedroom units and 4 two-bedroom units).

Note: 1) The age restriction is guaranteed by a 99-year land use restriction, stating occupancy must be 62 years and older. This document is recorded at the Rockingham County Registry.

Note: 2) The total fixture description and count is as follows: all of the units have a kitchen with a single bowl sink and a low-volume dishwasher, as well as a bathroom with one low-volume toilet, one sink, and one showerhead. All fixtures and appliances met Energy Star specifications as well as the building design. We received a substantial rebate for instituting these requirements. There is a laundry room with several clothes washers and dryers in the lower level of the existing building.

2. Description of water sources, including water sources to be developed for non-potable uses such as irrigation: There are 3 600-foot deep drilled wells located in a properly protected well field area located on the property. The meters and treatment are located in the lower level of the existing building.
3. Name designation of each proposed water source and any existing sources:
BRW1 (Yellow), BRW2 (Green), BRW3 (Red)

4. Number of connections proposed for each of the following classes:
 - a) Residential: 1 building (with 25 units) and 1 building planned (with 14 units)
 - b) Industrial/Commercial/Institutional: 0
 - c) Municipal: 0
5. The water system does not provide water to any consecutive water systems or privately owned redistribution systems.
6. There are no proposed connections that receive more than 20,000 gpd.
7. Please provide the following information based on metered source withdrawal volumes from the last complete year. Please report in gallons. **Note* based on the existing 25 age-restricted units.**
Year: 2017/2018
Average daily use (ADU): 1,562.42 gpd
Lowest ADU in the winter: 1,258.57 gpd
Highest ADU in the summer: 2,783.28 gpd (Note: four leaks were discovered on 8/18/17)

C. Transfer of Ownership

1. The system ownership is not proposed to be transferred.

II. System Side Management

A. Water Meters

1. Source Meters

- a) No later than the source activation date, meters will be installed on each new and any existing water source. There is currently a source meter on each well.
- b) An irrigation well is not proposed.
- c) Source meter information for each existing source and if known, for each proposed source:
Source Name: BRW1 (Yellow)
Source Meter Make: Master Meter
Source Meter Model: Multi-jet
Source Meter Size: 3/4"
Serial Number: 2621256
Source Meter Installation Date: February 2017

Source Name: BRW2 (Green)
Source Meter Make: Master Meter
Source Meter Model: Multi-jet
Source Meter Size: 3/4"
Serial Number: 2621257
Source Meter Installation Date: February 2017

Source Name: BRW3 (Red)
Source Meter Make: Master Meter
Source Meter Model: Multi-jet
Source Meter Size: 3/4"
Serial Number: 2621255
Source Meter Installation Date: February 2017

d) No later than the source activation date, source meters will be read at least every 30 days. The meters are currently read every day, and information is kept in an on-site log book.

2. Meter Selection, Installation and Maintenance

- a) All meters will be American Water Works Association (AWWA) certified, with the exception of b), below.
- b) AWWA does not have standards for magnetic flow meters. If a magnetic flow meter is proposed, the meter make, model, size and manufacturer specifications will be forwarded to the NHDES Water Conservation program for review. The meter will not be installed until receiving approval for its use from NHDES.
- c) The selected size of the meters will be based on projected flow rates.
- d) Meters will be installed as specified by the manufacturer, including requirements for horizontal or vertical placement, distance of straight run of pipe upstream and downstream of the meter and strainer installation. If the manufacturer does not supply installation specifics, meters will be installed in accordance with the "Manual of Water Supply Practices M6, Water Meters-Selection, Installation, Testing, and Maintenance" (AWWA, 2012).
- e) The following meter testing and calibration schedule or meter change-out schedule will be implemented. If the manufacturer's accuracy warranty extends beyond the schedule below, the meter will be tested or changed-out no later than the warranty expiration date.

| Meter Size (inches) | Testing Rate (years) |
|---------------------|----------------------|
| <1" | 10 yrs |
| 1" - 2" | 4 yrs |
| 3" | 2 yrs |
| >3" | 1 yr |

- f) A log of the date meters were installed, tested, calibrated, repaired and replaced will be maintained. Calibration certificates will be kept on file.

B. Pressure Management

1. The design pressures of the system are from 45 psi to 65 psi.

C. Leak Detection and Repair

1. Leak detection methodologies will be conducted in accordance with the “Manual of Water Supply Practices M36, Water Audits and Loss Control Programs” (AWWA, 2016).
2. Leaks will be repaired within 60 days of discovery unless a waiver is obtained in accordance with Env-Wq 2101.23.
3. A log of all leaks will be maintained, including the date the leak was discovered, the date the leak was repaired, the type of leak (ex. service, main, hydrant, valve), the size of the leak (gpm) and the nearest street address to the leak.

D. Water Loss Minimization: Night Flow Analysis

1. The system will conduct a night flow analysis at least twice a year. Night flow analysis will be implemented no later than three months from the date of water conservation plan approval.
2. A distribution meter capable of reading low flows will be installed on the distribution line. The system will use the currently installed chemical feed meter, which is a 1” Pulsafeeder Multi-jet.
3. See Appendix B for the night flow methodology.

III. Consumption Side Management

A. Educational Outreach Initiative

1. No later than three months from the date of water conservation plan approval, the system will begin distributing water efficiency outreach materials twice a year: at the beginning of each year and with the Consumer Confidence Reports. The materials distributed will be either NHDES Water Efficiency Fact Sheets located at <http://des.nh.gov/organization/commissioner/pip/factsheets/dwgb/index.htm#efficiency> or EPA WaterSense materials located at <http://www.epa.gov/watersense/>.
2. The system will maintain a log indicating how the system has complied with III. A.1., above. The log will include dates the outreach and education actions were taken and what was done.

IV. Reporting and Implementation

- A. The water system will submit a form supplied by NHDES once every three years from the date of the water conservation plan approval documenting how compliance with the requirements of Env-Wq 2101, *Water Conservation* rules, is being achieved.
- B. The data collected with each night flow analysis from the previous three years, as well as a statement as to whether a leak was suspected or not, will be submitted with the report form in IV.A., above.
- C. The water system will report monthly production volumes quarterly to the NHDES Water Use Registration and Reporting Program upon receiving a Water Use ID number from NHDES. Monthly means once every calendar month, but no sooner than 27 days after and no later than 33 days after the previous reading.

D. Summary of Reporting Requirements

| Frequency | Action |
|-----------------------------------|---|
| Every month | Read Source Meters |
| Every quarter | Report Monthly Source Meter Readings to NHDES |
| Every 6 months | Perform Night Flow Analysis |
| Every 6 months | Distribute Water Efficiency Outreach Materials to Residents |
| Every 3 years from October 2018 | Submit Ongoing Compliance Report to NHDES |
| Every 4 years from February 2017 | Test or Replace Chemical Feed Meter |
| Every 10 years from February 2017 | Test or Replace Source Meters |

I certify that I have read this Water Conservation Plan, understand the responsibilities of the water system as referenced in the plan, and that all information provided is complete, accurate, and not misleading.

Owner Name (print): CHANDLER PLACE Apartments

Owner Signature: by Steven W. Lewis Date: Dec 24, 2018

Appendix A Definitions

Authorized metered consumption: billed metered water plus unbilled metered water.

Community water system (CWS): a public water system which serves at least 15 service connections used by year-round residents or regularly serves at least 25 year-round residents.

Consecutive water system: a public water system that buys or otherwise receives some or all of its finished water from one or more wholesale systems for at least 60 days per year.

Final source approval: the date of final well siting approval or the date of issuance of the large groundwater withdrawal permit.

Large community water system: a community water system that serves more than 1,000 persons.

Privately owned redistribution system (PORS): A system for the provision of piped water for human consumption which does not meet the definition of a public water system and meets all of the following criteria:

(1) Obtains all of its water from, but is not owned or operated by, a public water system; (2) serves a population of at least 25 people, 10 household units or 15 service connections, whichever is fewest, for at least 60 days per year; and (3) has exterior pumping facilities, not including facilities used to reduce pressure, or exterior storage facilities which are not part of building plumbing.

Public water system (PWS): a system for the provision to the public of piped water for human consumption, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

Small community water system: a community water system that serves 1,000 people or less.

Source activation date: the date the source is placed into use.

System input volume: the volume of water input to the water supply system after treatment, analysis and storage.

Water balance: the difference between the system input volume and authorized metered consumption.

Water conservation: any beneficial reduction in water losses, waste or use.

Wholesale system: a public water system or an industrial, commercial or institutional (ICI) water user that treats source water and then sells or otherwise delivers finished water to a consecutive water system or privately owned distribution system.

Appendix B
Leak Detection: Night Flow Methodology

1. Distribution Meter

- a. A 1" Pulsafeeder Multi-jet meter is installed prior to the backwashing filters. This meter can be used to measure night time flows. During the night flow analysis, the filters will be set to regenerate after the analysis has been completed.

2. Determining Baseline Flow

- a. Baseline flow will be determined when the system is tight. The system will be considered tight when (this may vary based on the size and age of the system):
 - 1. A leak detection survey is conducted and all leaks discovered are repaired; or
 - 2. An initial night flow analysis is conducted and night flow decreases to 0 gallons per minute (gpm).
- b. The results of the analysis and the proposed baseline flow will be submitted to NHDES for review.
 - 1. The results of a night flow analysis conducted on 6/13/18 were submitted to NHDES on 7/13/18. Based on those results, the baseline flow is 0 gpm.

3. Night Flow Analysis

- a. Night flow analysis will be conducted at least twice a year and no sooner or later than 6 months apart.
- b. Water usage will be recorded every minute for one hour during a period of anticipated low demand using a distribution meter. Prior to the night flow analysis, users of the system will be requested to refrain from using water between the pre-determined times on this date. (Night flow analysis will be conducted prior to sprinkler season.)
- c. If the low flow is above the baseline, then flows will continue to be recorded for an additional hour.
- d. If the low flow is more than 2 gpm above the baseline, a leak will be suspected.
 - 1. All residents will be asked to check their units for leaks, including running toilets and outdoor spigots. The previous steps will then be repeated in 3 days. If the low flow is still above the baseline, the actions in Steps 2 below will be taken.
 - 2. If the leak continues, system staff will investigate for leaks in the building and perform inspections, looking for running toilets, leaky faucets, and loose fittings. Leaks will be promptly addressed.
- e. Records will be maintained of each night flow analysis, including recorded flows and leak detection results.

Appendix C Notification Process

Public Notification Instructions

Once a final draft of the water conservation plan is agreed upon by the applicant and NHDES, NHDES will send a signature line to the applicant for addition to the plan along with a summary of the requirements of Env-Wq 2101, *Water Conservation* rules. Within 10 working days of receiving the summary from NHDES, the applicant is required to provide a copy of the water conservation plan via certified mail with return receipt requested to the governing board of the municipality in which a proposed source is located, all municipalities that will receive water from the water system (if any), all wholesale customers (if any) and the regional planning commission serving the location of the proposed source. In most cases, only the municipality and the regional planning commission will require notification. All signed copies of the certified mail return receipts (the green cards) must be forwarded to NHDES along with the final, signed water conservation plan.

Additional Attachments

The applicant must provide the governing boards with a summary of the requirements of Env-Wq 2101, which may be found at http://des.nh.gov/organization/divisions/water/dwgb/water_conservation/index.htm, and request that the governing board amend local site planning requirements to reflect the requirements of Env-Wq 2101 or to promote water efficiency.

Notification of Consecutive Water Systems and Privately Owned Redistribution Systems

Within 5 working days of obtaining final approval of the source from NHDES, the system is required to notify any consecutive water system or privately owned redistribution system receiving water from the system, that pursuant to Env-Wq 2101.13, the systems must implement a water conservation plan and should contact the NHDES Water Conservation Program using the contact information below.

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